2000 to 2003 Comparison of the International Residential Code

Plumbing Section

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- **R 323.1.6, P 2602.2, P 3001.3 & P 3101.5** Flood Hazard. Requires systems and equipment to be installed above the design flood elevation.

  Exception: The following are permitted to be installed below the design flood elevation provided they are designed and installed to prevent water from entering or accumulating: Water service pipes, pumps, sanitary drainage piping, storm drainage piping, plumbing systems, etc…

Plumbing System Testing

P2503.8 Test gauges. Gauges used for testing shall be as follows:

1. Tests requiring a pressure of 10 psi or less shall utilize a testing gauge having increments of 0.10 psi or less.
2. Tests requiring a pressure of greater than 10 psi but less than or equal to 100 psi shall utilize a testing gauge having increments of 1 psi or less.
3. Tests requiring a pressure of greater than 100 psi shall utilize a testing gauge having increments of 2 psi or less.

House in the country .... $1 Million.

Three luxury cars .... $150,000.

Leaving town during a cold Michigan winter without turning off the water pipes in your garage ..... PRICELESS!

Protection from freezing didn't change but please don't forget, heat, insulation or both!!

2003 IRC P 2603.6

P2605.1 Piping support.

TABLE P2605.1
PIPING SUPPORT

PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (feet)	MAXIMUM VERTICAL SPACING
ABS pipe	4	10[b]
Aluminum tubing	10	15
Brass pipe	10	10
Cast-iron pipe	5[a]	15
Copper or copper alloy pipe	12	10
Copper or copper alloy tubing ($1^1/_4$ inch diameter and smaller)	6	10
Copper or copper alloy tubing ($1^1/_2$ inch diameter and larger)	10	10
Cross-linked polyethylene (PEX) pipe	2.67 (32 inches)	10[b]
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe	2.67 (32 inches)	4[b]
CPVC pipe or tubing (1 inch in diameter and smaller)	3	10[b]
CPVC pipe or tubing ($1^1/_4$ inch in diameter and larger)	4	10[b]
Lead pipe	Continuous	4
PB pipe or tubing	2.67 (32 inches)	4
Polyethylene/aluminum/polyethylene (PE-AL-PE) pipe	2.67 (32 inches)	4[b]
PVC pipe	4	10[b]
Stainless steel drainage systems	10	10[b]
Steel pipe	12	15

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.
a. The maximum horizontal spacing of cast-iron pipe hangers shall be increased to 10 feet where 10-foot lengths of pipe are installed.
b. Midstory guide for sizes 2 inches and smaller.

P2608.4 Product certification.

TABLE P2608.4
PRODUCTS AND MATERIALS REQUIRING THIRD-PARTY TESTING AND THIRD-PARTY CERTIFICATION

PRODUCT OR MATERIAL	THIRD-PARTY CERTIFIED	THIRD-PARTY TESTED
Backflow prevention devices	Required	—
Plumbing appliance	Required	—
Plumbing fixtures	—	Required
Potable water supply system components and potable water fixture fittings	Required	—
Sanitary drainage and vent system components	Plastic pipe, fittings, and pipe related components	All others
Special waste system components	—	Required
Storm drainage system components	Plastic pipe, fittings, and pipe related components	All others
Subsoil drainage system components	—	Required
Waste fixture fittings	Plastic pipe, fittings, and pipe related components	All others
Water distribution system safety devices	Required	—

- **Chapter 27** This chapter has added various fixture standards.
- P 2705.1 Item #5 : The centerline of water closets or bidets shall not be less than 15 inches from adjacent walls or partitions or not less than 15 inches from centerline of a bidet to the outermost rim of an adjacent water closet. There shall be at least 21 inches clearance in front of the water closet, bidet or lavatory to any wall, fixture or door.

Waste Receptors

- P2706.1. Requires open hub waste receptors to extend not less than 1” above the floor.

Water heater pans

P2801.5.1

- The pan shall be drained by an indirect waste pipe having a minimum diameter of 3/4 inch or the outlet diameter of the relief valve, whichever is larger.

Combination water/space heaters

P 2802.2 Requires when these type units are set above 140° a master thermostatic mixing valve complying with ASSE 1017, shall be installed for the domestic hot water system.

P2902.2 Applications for backflow prevention devices.

TABLE P2902.2
APPLICATION FOR BACKFLOW PREVENTERS

DEVICE	DEGREE OF HAZARD[a]	APPLICATION[b]	APPLICABLE STANDARDS
Air gap	High or low hazard	Backsiphonage or backpressure	ASME A112.1.2
Air gap fittings for use with plumbing fixtures, appliances and appurtenances	High or low hazard	Backsiphonage or backpressure	ASME A112.1.3
Antisiphon-type fill valves for gravity water closet flush tanks	High hazard	Backsiphonage only	ASSE 1002 CSA CAN/CSA B125
Backflow preventer with intermediate atmospheric vents	Low hazard	Backpressure or backsiphonage Sizes $^1/_4$″ – $^3/_4$″	ASSE 1012 CSA CAN/CSA-B64.3
Double check backflow prevention assembly and double check fire protection backflow prevention assembly	Low hazard	Backpressure or backsiphonage Sizes $^3/_8$″ – 16″	ASSE 1015 AWWA C510
Double check detector fire protection backflow prevention assemblies	Low hazard	Backpressure or backsiphonage (Fire sprinkler systems) Sizes 2″ – 16″	ASSE 1048
Dual-check-valve-type backflow preventer	Low hazard	Backpressure or backsiphonage Sizes $^1/_4$″ – 1″	ASSE 1024
Hose connection backflow preventer	High or low hazard	Low head backpressure, rated working pressure backpressure or backsiphonage Sizes $^1/_2$″–1″	ASSE 1052
Hose-connection vacuum breaker	High or low hazard	Low head backpressure or backsiphonage Sizes $^1/_2$″, $^3/_4$″, 1″	ASSE 1011 CSA CAN/CSA-B64.2
Laboratory faucet backflow preventer	High or low hazard	Low head backpressure and backsiphonage	ASSE 1035, CSA B64.7
Pipe-applied atmospheric-type vacuum breaker	High or low hazard	Backsiphonage only Sizes $^1/_4$″ – 4″	ASSE 1001 CSA CAN/CSA-B64.1.1
Pressure vacuum breaker assembly	High or low hazard	Backsiphonage only Sizes $^1/_2$″ – 2″	ASSE 1020
Reduced pressure detector fire protection backflow prevention assemblies	High or low hazard	Backsiphonage or backpressure (Fire sprinkler systems)	ASSE 1047
Reduced pressure principle backflow preventer and reduced pressure principle fire protection backflow preventer	High or low hazard	Backpressure or backsiphonage Sizes $^3/_8$″ - 16″	ASSE 1013 AWWA C511 CSA CAN/CSA B64.4
Spillproof vacuum breaker	High or low hazard	Backsiphonage only Sizes $^1/_4$″- 2″	ASSE 1056
Vacuum breaker wall hydrants, frost-resistant, automatic draining type	High or low hazard	Low head backpressure or backsiphonage Sizes $^3/_4$″, 1″	ASSE 1019 CSA CAN/CSA-B64.2.2

P 2904.4.1 New exception for sewer and water service in the same trench. The required separation distance shall not apply where a water service pipe crosses a sewer pipe, provided the water service pipe is sleeved to at least 5 feet horizontally from the sewer pipe centerline, on both sides of such crossing with pipe materials listed in Tables P2904.4.1, P3002.1 or P3002.2.

P 2904.17 Adds Press-type mechanical joint.

- Press-type mechanical joints in copper tubing shall be made in accordance with the manufacturer's instructions using approved tools which affix the copper fitting with integral O-ring to the tubing.

- **P 3002.2** References approved piping materials for forced mains.

- **P 3005.1.1** Back-to-back water closet connections to double sanitary tee patterns shall be permitted where the horizontal developed length between the outlet of the water closet and the connection to the double sanitary tee is 18 inches or greater.

- **P 3005.1.7** States a pipe size reduction in the direction of flow for drainage piping is prohibited. A 4”X3” water closet connection shall not be considered a reduction.

- **P 3005.2** Cleanout requirements do not apply to **pressurized** building drains and sewers that discharge to a gravity system.

- **P 3007.2.1** Addresses the required standard and piping for macerating toilets.

P 3007.1

Access shall be provided for valves. Valves shall be located above the sump cover or, when the discharge pipe from the ejector is below grade, the valves shall be accessibly located outside the sump below grade in an access pit with a removeable access cover.

- **P 3105.1** Added exception to trap to vent distances for self-siphoning fixtures such as water closets.

- **P 3111.1** A combination drain and vent system **shall not** receive the discharge of food waste grinders.

P 3114.4 Adds some guidance for air admittance valve location.

USBC changes table P 3201.7 for trap sizes to read as follows:

Shower traps and drains can now be a minimum of 1½” in diameter.

No matter what your opinion is of the changes to the plumbing code, you must admit we have come a long way from this!

To this!

Questions for Plumbing